

REMARKS/ARGUMENTS

Applicants thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action, and amended as necessary to more clearly and particularly describe the subject matter that Applicants regard as the invention. Applicants respectfully submit that the present application is in a condition for allowance in view of the following remarks.

Interview Summary

Applicants thank the Examiner for setting aside the time required to conduct the telephone interview with the undersigned attorney on August 3, 2009. During the interview, the limitations regarding the supply voltage supplied by the amplitude modulated signal amplifier to the high-frequency power amplifier were discussed in view of the teachings found in paragraphs [0008]-[0010] of Sander. More specifically, the operation of the claimed subject matter in two separate modes utilizing a substantially constant and variable voltage supply voltage for the different modes was explained and distinguished from the teachings of Sander. The Examiner's initial impression was that such a distinction would overcome the combination of references currently of record, but no formal agreement was reached.

Claim Rejections – 35 U.S.C. § 103(a)

Claims 1 and 3-6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,530,923 to Heinonen *et al.* (hereinafter "Heinonen") in view of U.S. Patent No. 6,002,923 to Sahlman (hereinafter "Sahlman") and further in view of U.S. Patent Application Publication No. 2005/0048935 to Sander *et al.* (hereinafter "Sander"). However, Applicants respectfully submit that the combination of Heinonen in view of Sahlman and Sander fails to teach every feature of the invention recited in amended claim 1.

Specifically, the combination of Heinonen, Sahlman and Sander fails to teach, suggest or otherwise render predictable the amplitude modulated signal amplifier recited in claim 1. As claimed in amended claim 1, the amplitude modulated signal amplifier that (i) supplies a substantially constant DC power supply voltage to the high-frequency amplifier in the second

mode and (ii) amplifies and supplying an amplified, variable voltage amplitude-modulated signal as the power supply voltage to the high-frequency amplifier operating in the first mode. The combination of Heinonen and Sahlman fail to teach or suggest such a feature as explained in detail in Applicant's previous response.

Sander, cited in the Office action as teaching the claimed amplifier, does disclose an amplifier. But there is no indication in Sander that the amplifier therein supplies a substantially constant DC power supply voltage to the high-frequency amplifier in the second mode and amplifies a variable-voltage, amplitude-modulated signal and supplies this amplified signal as the power supply voltage to the high-frequency amplifier while operating in the first mode. In contrast, the cited portion of Sander merely explains that amplification can be accomplished in multiple stages to allow for a broad range of amplification, but is silent regarding the provision of different power supply voltages as claimed.

Further yet with regard to claim 1, the combination of Heinonen, Sahlman and Sander also fails to teach, suggest or otherwise render predictable a multiplier for generating a multiplied signal by multiplying a phase-modulated signal by an amplitude modulated signal that is to be linearly amplified by the high-frequency power amplifier operating in the second mode. Heinonen and Sander fail to teach such a multiplier. Sahlman, cited in the Office action as teaching a multiplier, teaches a multiplier (FIG. 3, item 120) that generates a multiplied signal, but the multiplied signal in Sahlman is subsequently filtered by a bandpass filter, and does not appear to be amplified, much less linearly amplified by a high-frequency power amplifier.

For at least the reasons stated above, Applicants respectfully submit that the combination of Heinonen, Sahlman and Sander fails to teach, suggest or otherwise render predictable every feature of the claimed invention as required to maintain a rejection of claim 1 for purposes of 35 U.S.C. §103(a).

Claim 5 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Heinonen in view of Sahlman and Admitted Prior Art (hereinafter "Admission"). However, Applicants respectfully submit that the combination of Heinonen, Sahlman and Admission fails to teach every feature of the invention recited in amended claim 5.

Specifically, Applicants respectfully submit that combination of Heinonen in view of Sahlman and Admission fails to teach, suggest or otherwise render predictable selectively supplying the variable-voltage, amplitude-modulated signal and the substantially constant DC voltage to the amplitude-modulated signal amplifier depending on the mode in which the high-frequency power amplifier is operating. Heinonen, Sahlman and Admission all fail to teach selective transmission of two signals such as the variable-voltage, amplitude-modulated signal and the substantially constant DC voltage to an amplitude-modulated signal amplifier. It follows that Heinonen, Sahlman and Admission all fail to teach, suggest or otherwise render predictable selectively alternating delivery of such signals to the amplitude-modulated signal amplifier as claimed.

For at least this reason, Applicants respectfully submit that the combination of Heinonen in view of Sahlman and Admission fails to teach, suggest or otherwise render predictable every feature of the invention recited in amended claim 5 as required to maintain a rejection of that claim under 35 U.S.C. §103(a).

Claim 8 also stands rejected under 35 U.S.C. §103(a) as being unpatentable over Heinonen in view of Admission. However, for reasons analogous to those discussed above regarding claims 1 and 5, Applicants respectfully submit that the combination of Heinonen and Admission fails to teach every feature of the invention recited in amended claim 8.

Specifically, the combination of Heinonen and Admission fails to teach, suggest or otherwise render obvious a switch for selectively connecting the amplifier to a DC power supply to receive a substantially constant DC voltage when the high-frequency amplifier is operating in the second mode and to the amplitude and phase separator to receive the variable voltage, amplitude-modulated signal as the supply voltage when the high-frequency amplifier is operating in the second mode. Again, Heinonen and Admission each fails to teach transmission of two signals such as the amplitude-modulated signal and the DC voltage to an amplitude-modulated signal amplifier, as well as the selective transmission based on an operational mode of a high-frequency power amplifier. It follows that the combination of Heinonen and Admission fails to teach, suggest or otherwise render predictable for mutually exclusively connecting the amplifier to a DC power supply when the high-frequency amplifier is operating in the second mode and to

the amplitude and phase separator when the high-frequency amplifier is operating in the first mode.

For at least the reason above, Applicants respectfully submit that the combination of Heinonen in view of Admission fails to teach, suggest or otherwise render predictable every feature recited in claim 8 as required to maintain a rejection of that claim under 35 U.S.C. §103(a).

The remaining claims in the present application, specifically claims 2-4, 6, 7, 9 and 10 are allowable for the limitations therein and for the limitations of the claims from which they depend.

In light of the foregoing, it is respectfully submitted that the present application is in condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No.: NGB-39582.

Respectfully submitted,
PEARNE & GORDON, LLP

By: /donald j. firca, jr./
Donald J. Firca, Jr. – Reg. No. 48,140

1801 East 9th Street
Suite 1200
Cleveland, Ohio 44114-3108
(216) 579-1700

Date: August 5, 2009